

ABSTRACT OF THE DISCLOSURE

A garbage collector that reclaims memory for a mutator does so space-
incrementally, employing remembered sets associated with respective heap regions to
keep track of where the mutator has notified it of writing references into the associated
5 regions. The collector reserves some heap regions for objects that it has found to be
“popular,” i.e., to which it has observed a large number of references. When the mutator
writes such a reference, it refrains from making the kind of notification to which the gar-
bage collector would otherwise respond by updating a remembered set. Although this
deprives the garbage collector of the ability to maintain complete remembered sets for
10 popular-object regions, those regions usually have no unreachable objects or very few, so
the collector can dispense with collecting them or can collect them less frequently, in a
way that does not rely on remembered sets.